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TRENDS IN EFFICIENCY IN MEAT PROCESSING AND DISTRIBUTION

A REPORT

OF THE

CONSUMERS STUDY SUBCOMMITTEE

OF THE

COMMITTEE ON AGRICULTURE

HOUSE OF REPRESENTATIVES

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LETTER OF TRANSMITTAL

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D. C., March 10, 1958.

Hon. HAROLD D. COOLEY,
Chairman, House Committee on Agriculture,
Washington, D. C.

MY DEAR MR. CHAIRMAN: I hand you herewith a report from the Consumers Study Subcommittee dealing with trends in efficiency in meat processing and distribution. The subcommittee has made specific recommendations intended to be beneficial to farmers, the meat industry, and to the consuming public.

Very truly yours,

VICTOR L. ANFUSO,
Chairman, Consumers Study Subcommittee.

TRENDS IN EFFICIENCY IN MEAT PROCESSING AND DISTRIBUTION

The Consumers Study Subcommittee, as one of its first activities, undertook a study and investigation of trends in efficiency in meat processing and distribution.

Marketings of meat animals account for about 28 percent of all farm marketings. Purchases of meats also account for about 22 percent of all family food purchases. In addition to its great importance in the food industry meat processing and distribution was selected for early study for another important reason. Most American families are not eating as much meat as they would if retail meat prices were lower or their incomes were higher. Yet farmers have the capacity to increase meat animal production substantially. In fact, the expansion of meat production and consumption holds promise of making a major contribution to the solution of the current "farm surplus" problems.

Thus, gains in efficiency in meat processing and distribution, which are reflected in lower marketing charges, are of key importance in achieving increased meat production and consumption with profitable price levels to producers.

Findings of the Subcommittee

The subcommittee has been informed of substantial gains in efficiency in meat processing and distribution in recent years. However, most of the gains in efficiency have been made in curing and processing pork products. Technical improvements in refrigeration also have lowered unit refrigeration costs in cooling all types of meats. Few changes have occurred, however, in the handling of beef by the meatpackers.

Gains in efficiency in meat distribution have occurred as a result of several developments. Larger, more efficient chain grocery stores and supermarkets have replaced most of the smaller specialized meat markets. The recent shift to self-service meat counters in these stores has been only a minor factor in reducing labor requirements in meat distribution.

There is an increasing number of small packers who sell directly to chain stores or local supermarkets and who deliver the meat directly from the chillroom of the packing plant to the cutting room of the retail store. With the larger volume retail outlets available, national meat packers are rapidly eliminating their branch houses, and reducing the handling of the product between the packing plant and the retail counter.

In the period 1947 to 1954, man-hours of production workers in the meatpacking industry declined 6 percent, although the liveweight of animals slaughtered increased 17 percent. Hence, output per man-

hour of production workers in the meatpacking industry increased 24 percent from 1947 to 1954. Comparative data indicate that the output per man-hour in all manufacturing industries, from 1947 to 1955, increased 34 percent; output per man-hour in agriculture, 1947 to 1955, increased 32 percent; and in this period output per man-hour in bituminous coal mining increased 63 percent.

In the meat products manufacturing industry, as classified by the Bureau of the Census, the number of production workers increased 17 percent from 1947 to 1954, and the value of product per man-hour added by manufacture in constant dollars, increased 38 percent.

Although meatpacking was one of the earliest industries to adopt assembly line and other modern production techniques, technical progress and gains in efficiency in meat processing, have been below the average of all industries in recent years. There are a number of reasons for this.

The larger meatpackers report that their profits have not been large enough to permit as much research as is desirable. Many of the plant facilities of the larger packers are old and in some cases they are not located advantageously in view of the current centers of meat production and consumption. In the words of one packer, "important meat processing economies are dependent on investment in new plants and new facilities." But the packing industry reports it does not have the funds to make these investments rapidly.

Although relocation of packing plants and modernization of equipment is a special problem in the meatpacking industry, a number of other factors are important in explaining the current less than optimum levels of efficiency in the industry as a whole.

INCREASE IN COSTS OF MEAT MARKETING SINCE 1947–49

On a percentage basis meat-marketing costs have increased more than the marketing costs of most other major food groups since 1947–49. In 1957, the marketing bill for a fixed quantity of each of the major food groups, compared with 1947–49, was as follows: [1]

	Percent higher
Meat products	42
Dairy products	33
Fruits and vegetables	26
Bakery and cereal products	43
Poultry and eggs	1
Fats and oils	5
All farm foods	28

RECOMMENDATIONS

INCREASED RESEARCH RE COST REDUCTION

The subcommittee views increased meat-marketing costs with concern and makes a number of recommendations in the interests of holding down further increases in these costs.

Technological and economic research on problems involved in reducing meat processing and distribution costs should be increased sharply.

The United States Department of Agriculture and the land-grant colleges are now spending 6 to 8 times as much on research relating

[1] Computed from the Marketing and Transportation Situation, USDA, January 1958.

to efficiency of meat animal production as on research relating to efficiency of meat processing and distribution. Yet in 1956 the total meat-marketing bill was $6.2 billion which is almost equal to the farm value of meat animals marketed, $6.6 billion.

This unbalanced distribution of public research funds between production and marketing of meat is partially offset by the private research relating to meat processing and marketing carried on by the large meat packers, the American Meat Institute and the suppliers of meat packing equipment and supplies.

Although the American Meat Institute Foundation has a staff of 55 trained scientists and laboratory technicians, they are engaged primarily in studying such projects as beef tenderization, meat preservation, nutritional values and the chemistry of meat. These valuable basic projects carried on by the small meat institute staff are related only indirectly to efficiency in meat marketing. Furthermore, the extensive research programs of the large meatpacking companies fail to meet fully the needs of the industry.

In the first place individual company research results are closely guarded, unless they are subject to patent. There are over 2,000 meatpacking firms, and usually they learn about individual company research results, if at all, in spite of the secrecy of the originating firm. Although cost saving innovations, when discovered by a large meatpacker, spread fairly rapidly in the industry, each firm usually takes all precautions possible to prevent competitors from acquiring knowledge of new innovations.

But there is an even more important reason why farmers' and the general public's interests are not adequately served by the research programs of the individual large meatpacking companies. Today the best research talents of these companies are directed toward the development of new manufactured products, using patented processes if possible. These new products are developed for consumers who are willing and able to pay premium prices for "convenience" or partially prepared meats. Reports from individual meatpacking companies indicated that usually a large part of their profits were due to the production and sale of these manufactured products.

The development of new, usually higher cost manufactured meat products is of value to the livestock producer in that it may lead to some increase in demand for meat products. To a very large extent, however, increased consumption of the new manufactured products is a substitution of a new product for another type of meat.

Approximately 90 percent of the families purchasing meat in 1955 would have bought more meat per week if meat prices had been lower or their incomes had been higher. The upper 10 percent of the families, in terms of income, did not increase the amount of meat consumed per person as their incomes increased beyond the $8,000 annual income level. (See table.)

TABLE 1.—*Estimated percentage of housekeeping households receiving specified money incomes after taxes in 1954, and pounds of meat used per person in a week by each household income class, spring 1955*[1]

Income class	Housekeeping households	Meat used per person in a week, households of 2 or more persons
	Percent	*Pounds*
Under $1,000	6.5	2.02
$1,000 to $1,999	10.2	2.47
$2,000 to $2,999	13.1	2.86
$3,000 to $3,999	18.6	2.90
$4,000 to $4,999	19.3	3.14
$5,000 to $5,999	11.6	3.27
$6,000 to $7,999	12.1	3.37
$8,000 to $9,999	4.0	3.28
$10,000 and over	4.6	3.55

[1] Derived from data of 1955 Household Food Consumption Survey, by Agricultural Marketing Service.

The high-income families buy a large proportion of the higher priced cuts of meat. The new manufactured products developed by the research staffs of the meatpackers are purchased by these and other families in many cases in lieu of other types of meat which require more preparation before serving.

Although the private research of individual meatpackers has made great contributions to the efficiency of meat processing and distribution in the past, because of the source of greater profits in recent years their efforts are now devoted primarily to the development of new higher cost, not lower cost, meat products. Yet, studies indicate when prices of fresh meats are lowered, purchases increase by almost an equal percentage.

The large meatpacking companies, with their own research departments, have little to gain and may experience increased competition from the smaller meatpacking companies, which now number around 2,400, if public or private research on an industry basis is increased.[1] They point to the research programs of the firms manufacturing packinghouse equipment and supplies and question the need for additional publicly or privately financed research for the meat processing and distribution industry.

No one can evaluate accurately the returns to be expected from additional technological and economic research directed toward increased efficiency in meat processing and distribution. However, farm-equipment and farm-supply manufacturers have impressive research programs for the improvement of their products, yet we have large publicly financed research programs in these fields carried on by the land-grant colleges and the United States Department of Agriculture. As indicated earlier publicly financed research in the field of meat-animal production is 6 to 8 times larger than in the field of meat marketing.

In view of the facts outlined above the subcommittee questions the desirability of continuing an unbalanced program in which research

[1] The census for 1954 reports 2,367 meatpacking establishments, excluding plants which have as their main business the production of sausage and other manufactured meat products. Similar Census data for 1939 and 1949 list 1,478 and 2,153 meatpacking establishments in those years.

In a letter from Assistant Secretary Butz to the chairman of this subcommittee, May 1, 1957, the statement was made that about 2,000 meatpackers are subject to the Packers and Stockyards Act of which about 1,300 slaughter livestock.

relating to the efficiency of meat processing and distribution is only a small fraction of the research directed at efficiency of meat animal production. It further points out that since 1951, when the farm value of meat products purchased by domestic civilian consumers reached its peak, the farm value has dropped 18.5 percent and the marketing bill for these meat products has increased 44 percent. These facts are related. When supplies of meat are abundant, increased marketing charges are associated with lower farm values of meat animals. Under these conditions additional research which increases the efficiency of processing and distributing our supplies of meat animals, is much more urgently needed, than additional research which results in increased supplies of meat.

CHANGE IN ADVISORY COMMITTEE MEMBERSHIP NEEDED

The meat-marketing research carried on by the Agricultural Marketing Service is reviewed annually by a Livestock Research and Marketing Advisory Committee. This committee is now made up of 7 producers, 2 veterinarians, 1 representative of the American Meat Institute, 1 meatpacker, and 1 distributor of meats.

It appears that this committee has had a majority of producers in its membership throughout its life. This may be appropriate if the policy of the Department of Agriculture is to continue major emphasis on research in livestock production with minor attention to meat-marketing problems.

In the past 5 years this advisory committee has made 114 recommendations for new or expanded research in the field of livestock production and 51 recommendations for new or expanded research in marketing. It also made 76 recommendations in the field of utilization of livestock products and 44 recommendations in the field of marketing services and education. In spite of a general agreement in recent years that increased emphasis should be placed on marketing problems, in the 10-year period 1945–46 to 1955–56 expenditures for research by the Agricultural Research Service (primarily production research) were increased threefold while expenditures for livestock and meat-marketing research were increased only a little over twofold.

And as pointed out earlier, in 1957–58 estimated expenditures for research relating to the efficiency of meat-animal production by the Department of Agriculture and the land-grant colleges are 6 to 8 times those for livestock and meat marketing research.

The Advisory Committee on Livestock and Meat Marketing should be reconstituted. A majority of the members of an advisory committee on meat marketing should have experience in medium and small meat processing and distributing businesses. Perhaps there should be separate committees on livestock production, and meat marketing.

LABOR EDUCATIONAL PROGRAM NEEDED

Reports from both the meatpacking companies and distributors indicated that labor relations are satisfactory in the industry. However, a number of instances have been called to the attention of the subcommittee where either opposition by employees or fear of opposition has prevented the adoption of labor-saving and cost-reducing techniques.

Other instances have been reported where employers have signed contracts with groups of employees which translated all increases in output per man into increased wages. Also, there are few, if any, general arrangements whereby representatives of employers and workers in meat processing and distribution come together from time to time to discuss matters of mutual interest. The employers have their associations and the workers have their organizations but employer organizations have only minimum contacts with the worker organizations. Representatives of employers and employees usually meet only to discuss specific grievances and for bargaining relative to wages.

Local workers may resist the introduction of labor-saving machinery and labor-saving techniques which reduce labor requirements. Opposition to technological progress can be lessened by fair and equitable arrangements with the employees during the transitionary periods and by assurances of higher wage levels as a result of the economies achieved. On the other hand, employers have no incentive for the introduction of new labor-saving machinery unless a part of the savings can be utilized for amortizing the investment and reducing unit costs.

There is evidence that technological progress in meat processing and distribution has been held back by excessive demands of employees or the fear of excessive demands based on experience elsewhere in the industry. Both producers and consumers have an economic interest in technological progress in meat marketing.

Research and educational programs should be undertaken jointly by representatives of employers and employees to discover ways and means of accelerating technical progress and cost reductions in meat processing and distribution.

The desirability of earmarking a small part of the funds appropriated for agricultural marketing research for this purpose might well be considered by the Appropriations Committees of Congress.

NEW CONCEPTION OF INDUSTRY PROBLEMS NEEDED

Great changes are in progress in meat distribution. These changes are largely associated with the growth of large volume retail sales units operated by food store chains and by individual supermarkets. These changes in distribution practices are changing the competitive structure in the meatpacking industry.

Improvements in refrigeration, packaging, and preservation materials are on the threshold of inaugurating even further changes in meat-distribution patterns.

Rapid increases in family income and the upward trend in employment of married women in recent years have increased greatly the market demand for precooked and prepared meats.

Freight and wage rates in recent years also have increased relative to farm prices of meat animals. In view of the abundant supplies of meat animals and the current trends in other parts of the economy, freight and wage rates may increase even further relative to farm prices for meat animals.

These great changes in technological and economic forces in meat distribution make it highly desirable that a broad research and experimental program aimed at producing fundamental economies in meat processing and distribution be undertaken promptly.

Most of the pioneering work on preservation of fresh meats at the present time is being carried on by the Quartermaster Corp of the Army. In addition to their work on sterilization by irradiation, a part of which is carried on jointly with individual meatpackers, they are testing out a new type of distribution of fresh beef.

After considerable planning and testing a number of Air Force bases in the United States are now purchasing a part or all of their beef requirements in the form of frozen boneless six-way beef.

Purchase specifications provide that dressed beef carcasses shall be divided into six boneless cuts: grill steaks, oven roasts, swiss steaks, pot roasts, diced and ground beef. The preparation of beef carcasses into these 6 groups of boneless cuts at the packing plant saves 38 to 40 percent in shipping weight and 75 percent in shipping and storage space as compared with carcass beef. It also permits increased mechanization and specialization in the cutting processes.

Substantial reductions in distribution costs and a number of other benefits might be expected from developments of this type in commercial meat processing and distribution.

Increased research and experimental work directed toward the development of an economic technology for preparing and packaging fresh meats at the packing plant is of great interest to both livestock producers and consumers. A severalfold increase in research of this type is needed.